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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,547	10/03/2003	James Thomas Carey	NLF-0322	2518

7590 01/25/2008  
ExxonMobil Research and Engineering Company  
P.O. Box 900  
Annandale, NJ 08801-0900

EXAMINER
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MCAVOY, ELLEN M

ART UNIT	PAPER NUMBER
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1797

MAIL DATE	DELIVERY MODE
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01/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/678,547

Applicant(s)

CAREY ET AL.

Examiner

Ellen M. McAvoy

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission, amendments to the claims, filed on 31 October 2007 has been entered.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berlowitz et al (6,475,960).

As previously set forth, Berlowitz et al ["Berlowitz"] disclose premium synthetic lubricants which comprise a synthetic isoparaffinic hydrocarbon base stock and an effective amount of at least one, and typically, a plurality of lubricant additives. The base stock is derived from a waxy, paraffinic, Fischer-Tropsch synthesized hydrocarbon feed fraction. The base stock may be prepared from the steps of (i) hydroisomerization, (ii) catalytic or solvent dewaxing, and (iii) fractionation. See column 2, lines 11-26. Berlowitz teaches that the base stocks are premium synthetic lubricating oil base stocks of high purity having a high viscosity index (VI), a

low pour point and are isoparaffinic in that they comprise at least 95 weight % of non-cyclic isoparaffins. The base stocks may have the properties set forth in Table 9, in column 14, wherein the VI is 143 and the pour point is  $-16^{\circ}\text{C}$ . The examiner is of the position that the premium synthetic lubricants of Berlowitz appear to meet the limitations of the functional fluid and of the process for preparing the functional fluid of the claims. Applicants' invention differs in independent claims 1, 2, 13 and 14 by including property (c) "a ratio of measured-to-theoretical low-temperature viscosity equal to about 1.2 or less, at a temperature of about  $-30^{\circ}\text{C}$  or lower, where the measured viscosity is cold-crank simulator viscosity and where theoretical viscosity is calculated at the same temperature using the Walther-MacCoull equation".

Independent claims 2 and 14 also add the limitation "a percent Noack volatility no greater than that calculated by the formula  $[-6.882\text{Ln CCS@ } -35^{\circ}\text{C}] + 67.647$ , where CCS@  $-35^{\circ}\text{C}$  is the base oil CCS viscosity in centipoise". Although the premium synthetic lubricants of Berlowitz are not characterized by such values, the examiner is of the position that the claimed function fluids may be the same as those disclosed in Berlowitz since the properties of VI and pour point may be the same, and since the claimed functional fluid may be prepared by the same process.

### ***Claim Rejections - 35 USC § 103***

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al (6,620,312).

As previously set forth, Murphy et al ["Murphy"] disclose a method for producing lube basestocks from waxy feeds including slack wax, Fischer-Tropsch wax, waxy raffinates and

waxy distillates to produce a high quality lube oil product having a unique structural character, a low pour point, a low viscosity, and a high viscosity index (VI). The method comprises the steps of (a) hydrotreating the feed to reduce the sulfur and nitrogen contents, (b) hydro-isomerizing a portion of the feed to reduce the wax content, (c) separation of the feed, and (d) hydrocatalytic dewaxing at least a portion of the feed from step (c). See column 1, line 37 to column 2, line 18. Properties of a typical product are set forth in Table 7 wherein VI values range from 137-139 and pour point values range from  $-25^{\circ}\text{C}$  to  $-27^{\circ}\text{C}$ . The examiner is of the position that the premium synthetic lubricants of Murphy appear to meet the limitations of the functional fluid and of the process for preparing the functional fluid of the claims. Applicants' invention differs in independent claims 1, 2, 13 and 14 by including property (c) "a ratio of measured-to-theoretical low-temperature viscosity equal to about 1.2 or less, at a temperature of about  $-30^{\circ}\text{C}$  or lower, where the measured viscosity is cold-crank simulator viscosity and where theoretical viscosity is calculated at the same temperature using the Walther-MacCoull equation". Independent claims 2 and 14 also add the limitation "a percent Noack volatility no greater than that calculated by the formula  $[-6.882\text{Ln CCS@ } -35^{\circ}\text{C}] + 67.647$ , where CCS@  $-35^{\circ}\text{C}$  is the base oil CCS viscosity in centipoise". Although the premium synthetic lubricants of Murphy are not characterized by such values, the examiner is of the position that the claimed function fluids may be the same as those disclosed in Murphy since the properties of VI and pour point may be the same, and since the claimed functional fluid may be prepared by the same process.

***Claim Rejections - 35 USC § 103***

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berlowitz et al (6,080,301).

As previously set forth, Berlowitz et al ["Berlowitz"] disclose a premium synthetic lubricating base stock having a high viscosity index (VI) and low pour point produced by (i) hydroisomerizing a waxy Fischer-Tropsch synthesized hydrocarbons to form a hydroisomerate, (ii) dewaxing the hydroisomerate to reduce its pour point and form a dewaxate, (iii) fractionating the dewaxate to form two or more fractions of different viscosity as the base stocks. See column 1, line 65 to column 2. The product base stock comprises essentially (>99+ wt.%) all saturated, paraffinic and non-cyclic hydrocarbons. Sulfur, nitrogen and metals are present in amounts of less than 1 wppm. Berlowitz teaches that fully formulated lubricating oils are prepared by adding to the base stock an effective amount of at least one additive such as a detergent, dispersant, antioxidant, antiwear agent and viscosity index improver. See column 4, lines 30 to column 5. Properties of a typical product are set forth in Table 4 wherein a viscosity index of 143 and a pour point of -16°C are set forth. The examiner is of the position that the premium synthetic lubricants of Berlowitz appear to meet the limitations of the functional fluid and of the process for preparing the functional fluid of the claims. Applicants' invention differs in independent claims 1, 2, 13 and 14 by including property (c) "a ratio of measured-to-theoretical low-temperature viscosity equal to about 1.2 or less, at a temperature of about -30C or lower, where the measured viscosity is cold-crank simulator viscosity and where theoretical viscosity is calculated at the same temperature using the Walther-MacCoull equation". Independent claims 2 and 14 also add the limitation "a percent Noack volatility no greater than that calculated by the

formula  $[-6.882 \ln \text{CCS@-35C}] + 67.647$ , where  $\text{CCS@-35C}$  is the base oil CCS viscosity in centipoise". Although the premium synthetic lubricants of Berlowitz are not characterized by such values, the examiner is of the position that the claimed function fluids may be the same as those disclosed in Berlowitz since the properties of VI and pour point may be the same, and since the claimed functional fluid maybe prepared by the same process.

***Claim Rejections - 35 USC § 103***

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bertomeu (6,599,864).

As previously set forth, Bertomeu discloses a hydrocarbon base oil for high end lubricants having a viscosity index (VI) not less than 130 and a pour point of less than  $-18^{\circ}\text{C}$  comprising mainly long isoparaffinic hydrocarbon chains, branched over several carbon atoms. See column 2, line 54 to column 3, line 15. Bertomeu teaches a method for preparing the hydrocarbon base oil consisting successively of hydrotreatment, hydrodewaxing, fractionation and hydrofinishing phases of cuts of residues resulting from hydrocracking. Bertomeu teaches that the hydrocarbon base oil can be measured by a new index called viscosity when cold (VIF) such that the oil has a ratio of cold viscosity index (VIF)/viscosity index (VI) that is greater than or equal to 1. See column 3, line 53 to column 4, top. The examiner is of the position that the premium synthetic lubricants of Bertomeu appear to meet the limitations of the functional fluid and of the process for preparing the functional fluid of the claims. Applicants' invention differs in independent claims 1, 2, 13 and 14 by including property (c) "a ratio of measured-to-theoretical low-temperature viscosity equal to about 1.2 or less, at a temperature of about  $-30^{\circ}\text{C}$

or lower, where the measured viscosity is cold-crank simulator viscosity and where theoretical viscosity is calculated at the same temperature using the Walther-MacCoull equation”.

Independent claims 2 and 14 also add the limitation “a percent Noack volatility no greater than that calculated by the formula  $[-6.882 \ln \text{CCS@ } -35\text{C}] + 67.647$ , where CCS@ -35C is the base oil CCS viscosity in centipoise”. Although the premium synthetic lubricants of Bertomeu are not characterized by such values, the examiner is of the position that the claimed function fluids may be the same as those disclosed in Bertomeu since the properties of VI and pour point may be the same, and since the claimed functional fluid maybe prepared by the same process.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

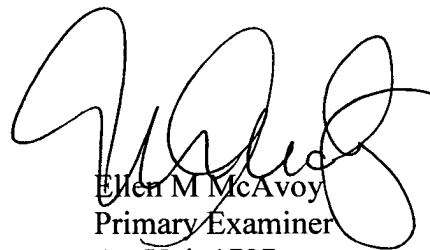
If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Application/Control Number:  
10/678,547  
Art Unit: 1797

Page 8

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ellen M. McAvoy  
Primary Examiner  
Art Unit 1797

EMcAvoy  
January 11, 2008